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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/992,050	11/21/2001	Dong Lin	PHA-101/US	4468

30869 7590 06/20/2003

LUMEN INTELLECTUAL PROPERTY SERVICES
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EXAMINER

ROJAS, OMAR R

ART UNIT	PAPER NUMBER
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2874

DATE MAILED: 06/20/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/992,050

Applicant(s)

LIN, DONG

Examiner

Omar Rojas

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 May 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-51 is/are pending in the application.
- 4a) Of the above claim(s) 2-8, 10-14, 16-21, 23-26 and 37-51 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 9, 15, 22 and 27-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Claims 2-8, 10-14, 16-21, 23-26, and 37-51 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 5.

Information Disclosure Statement

2. The prior art documents submitted by applicant in the Information Disclosure Statement(s) filed on November 21, 2001 have all been considered and made of record (note the attached copy of form(s) PTO-1449).

Specification

3. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 15, 22, and 33-36 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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6. Claims 15, 22, 33, 33-36 recite the limitation "fifth collimating means" in claims 15 and 33. There is insufficient antecedent basis for this limitation in the claims since a first through fourth collimating means are not defined or mentioned in claims 15 or 33. The scope of the claimed invention is thus not clear.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. **Claims 1, 9, 15, 22, 27-32, and 33-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,525,846 to Yan et al. (hereinafter "Yan") in view of U.S. Patent Application Publication No. 2002/0076144 to Tai et al. (hereinafter "Tai").**

Regarding claims 1, 9, 15, 22, 27-32, and 33-36, Yan discloses most of the salient features claimed including an optical multiplexer/demultiplexer (see Fig. 1) comprising: at least five different means/input/output ports (16, 28, 30) for providing a first and/or second input beam with two or more different wavelengths; a polarization beam combiner/splitter comprising two right angle prisms (22, 24); and a filter (26) comprising a grating disposed between the two prisms.

Yan further teaches that TE and TM optical modes may be provided to the prism combiner/splitters (22, 24). See col. 3, ll. 40-45. TE and TM optical modes are inherently considered extraordinary and ordinary light beams. As Yan also clearly

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states, the use of TE and TM modes are "so that the result is polarization independent." Id. at col. 3, ll. 40-45. Yan further states that techniques for creating these polarization effects "are known in the art." Id. Thus, the scope of Yan's invention would inherently include means for introducing extraordinary and ordinary light beams (i.e., TE and TM modes) from the ports (28, 30) to the beam combiners/splitters (22, 24).

Therefore, Yan only significantly differs from the claimed invention in that Yan does not expressly disclose that each of the input/output ports (28, 30) also comprise collimating means, provided with an assembly holding an optical fiber.

Tai, on the other hand, teaches collimating means comprising a GRIN lens used with an optical fiber assembly (Fig. 3, 330, 340). See also Tai at page 2, section [0032]. Tai is analogous art because the optical fiber collimating assemblies (330, 340) are used to direct optical beams in a wavelength multiplexing device.

The ordinary skilled artisan would have wanted to use the teachings of Tai in the invention of Yan because it is well known that using a collimating assembly such as the one taught by Yan is expedient for efficiently coupling lights signals from optical fibers to other optical devices.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the claimed invention to modify Tai with Yan to obtain the invention specified by claims 1, 9, 15, 22, 27-32, and 33-36.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent No. 6,560,015 to Cao also teaches using a collimating assembly to couple light signals between optical fibers and optical elements.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Omar Rojas whose telephone number is (703) 305-8528 and whose e-mail address is *omar.rojas@uspto.gov*. The examiner can normally be reached on Monday-Friday (7:00AM-3:00PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hemang Sanghavi, can be reached on (703) 305-3484. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-7722 for regular communications. The examiner's personal work fax number is (703) 746-4751.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Omar Rojas
Patent Examiner
Art Unit 2874

or
June 13, 2003


HEMANG SANGHAVI
PRIMARY EXAMINER